We claim:

1. Use of the method for the testing of documents using the capacitive coupling between transmitter and receiver and the transfer of energy between transmitter and receiver by electrically conductive safety materials wherein
for the forge test of documents with diffraction-optically effective safety layers with a discontinuous metallization layer **(14)** or partially metallic layers **(12, 20)** or zones of metallic layers in different planes the electrical conductivity is determined and evaluated.

2. The use of the method as claimed in claim 1 in which
for the forge test of documents with diffraction-optically effective safety layers with a discontinuous metallization layer **(14)** and partially metallic layers **(12, 20)** the electrical conductivity is determined and evaluated.

3. The use of the method as claimed in claim 1 in which
for the forge test of documents with diffraction-optically effective safety layers with a discontinuous metallization layer **(14)** and zones of metallic layers in different planes the electrical conductivity is determined and evaluated.

4. The use of the method as claimed in claim 1 in which
for the forge test of documents with diffraction-optically effective safety layers with partially metallic layers **(12, 20)** and zones of metallic layers in different planes the electrical conductivity is determined and evaluated.

5. The use of the method as claimed in claim 1 in which

for the forge test of documents with diffraction-optically effective safety layers with a discontinuous metallization layer **(14)** and partially metallic layers **(12, 20)** and zones of metallic layers in different planes the electrical conductivity is determined and evaluated.

6. The use of the method as claimed in ~~one or several of claims 1 to 5~~ claim 1 including

the testing of additionally applicable authenticity features within demetallized segments within discontinuous metallization layers **(14)** and/or partially metallic layers **(12, 20)** and/or between zones of metallic layers in different planes.

7. The use of the method as claimed in claim 6 including

the testing of the fluorescent properties of the additionally applicable authenticity feature.

8. The use of the method as claimed in claim 6 including

the testing of the phosphorescent properties of the additionally applicable authenticity feature.

9. The use of the method as claimed in claim 6 including

the testing of the light-absorbing properties of the additionally applicable authenticity feature.

10. The use of the method as claimed in claim 6 including

the testing of the magnetic properties differing from the surroundings of the additionally applicable authenticity feature.

11. The use of the method as claimed in ~~one or several of the preceding claims~~ claim 1 in which

the diffraction-optically effective safety layer is a hologram.

12. The use of the method as claimed in ~~one or several of the preceding claims~~ claim 1 including

the testing of holograms in high-speed processing machines with a speed of up to 2000 documents per minute.

13. The use of the method as claimed in ~~one or several of the preceding claims~~ claim 1 including

the testing of holograms in manual units.

14. A method for testing of documents using the capacitive coupling between transmitter and receiver and the transfer of energy between transmitter and receiver by electrically conductive safety materials in which

a document to be tested which has a diffraction-optically effective safety layer with a discontinuous metallization layer **(14)** and/or partially metallic layers **(12, 20)** and/or zones of metallic layers in different planes is guided in such a way that it passes through an electronic sensor system at a defined speed,

energy is capacitively transferred from one or several transmitting electrodes to one or several receiving electrodes via metallization layers,

the signals available at the receiving electrode or electrodes are amplified by means of an electronic evaluation system and are compared with a reference signal

and a signal classifying the document is available for further processing at the output of the electronic evaluation system.

15. The method as claimed in claim 14 in which

a document with diffraction-optically effective safety layers is tested in at least two different test directions.

16. The method as claimed in claim 14 in which

by means of the electronic evaluation system the classifying signal is logically combined with an authenticity signal of an additionally applicable authenticity feature after it has been tested by means of another sensor

and a combination signal classifying the document is available at the output of the electronic evaluation system for further processing.

Summary

This invention relates to a use of and a method for testing of documents. To date, documents with diffraction-optically effective safety layers, in particular holograms, have been tested with costly optical testing equipment. The entire testing process takes so long that these test procedures cannot be used in high-speed processing machines. Rapid testability is another safety stage in the valuation of diffraction-optically effective safety layers as a feature of authenticity. The diffraction-optically effective layer has a discontinuous metallization layer and/or partially metallic layers and/or zones of metallic layers in different planes. Various measuring methods to determine an electrical conductivity are known. In practice, the non-contacting, capacitive measuring method has proved useful.

The translation comprises nine (9) pages.

I, a translator of the English and Japanese languages who was officially appointed and generally sworn by the President of the Regional Court of Dresden, do hereby certify that the above translation of the certificate submitted to me as a copy and drawn up in the German language is correct and complete.

Dresden, 14 April 1998

Cornelia Metzker
Wilhelm-Raabe-Str. 7b
01157 Dresden